

TABHOUSE

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ABSTRACT

Finding a medicine can sometimes become a real headache and can sometimes cost a lot of time which is really not very efficient in the current age of technology. The Tabhouse is an online web based project. The Tabhouse website is being created for providing ease of use to the users who find it really difficult to locate a medical store which contains the medicine they are looking for. The Tabhouse project uses Web Engineering Concepts, web technologies and some of the Object Oriented Programming Concepts in order to achieve the goal of this project. The user will be able to find its medicine and the medical store containing the medicine.

KEYWORDS: *Object-Oriented Programming, Integrator, Web-Based System, Web Engineering, Tabhouse & Traditional Development*

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I. INTRODUCTION

As we can see the present era we are living in, is the era of Information Technology (IT), there are hundreds of electronic devices present today which can provide convenience in almost all aspect of daily life. There are a lot of locator/finding software applications and websites that can provide ease of use for the users such as (Find my Phone, Find my Doctor, Mechanic Dhondo etc.), these locator applications/websites support many functionalities but there isn't a single properly working applications/website that will help the user to find medical store/medicines nearby, which is very inconvenient in many situations. At present, there is no such application/website that can help its user in locating the medical store that may have the medicine the user is looking for and that medical store just might be nearby the user. There are very few applications on the internet for this kind problem but none of them is providing coverage for Pakistan.

The Tabhouse is a web-based location finding website. The Tabhouse project will make the cumbersome and time-consuming process of finding medicine way easier and convenient for its users and save a lot of time and effort. The project Tabhouse has been initiated/proposed to overcome the problem of finding the medicines that just might be available near you, which you might be looking in the far/distant places. It can be very helpful especially when you have just shifted your house from one place to another.

A. Problem Statement

Finding a medical store in an unfamiliar location is quite an headache, Even if you have managed to locate a medical store there is no guarantee that you will find the medicine that you are looking for and if they have that

medicine which you are looking for there is possibility that you might not find that medicine in the required quantity.

So, this is very inconvenient given the situation that is if the patient requires medicine immediately.

In our proposed system/project there are a number of problem areas being addressed, that being said the main problem being addressed is to provide an application/website that can find a medical store for its user.

The Tabhouse project is a wonderful idea and it can even help the whole country but due to the limitation of resources, time and the current dealing system of the medicines in Pakistan have completely narrowed down the project to its current scope. In future work the website can be extended to a medicine e-commerce website that will allow the users to buy medicines from the local medicine stores, that can be really convenient because of there is no one to fetch the medicine for the patient, then the patient can easily order the medicine online to his/her address.

B. Project Scope

The Tabhouse project will include the design, testing, and delivery of the medicine tracking system. All the personnel, software resources, implementation, and documentation will be managed by the software development team and by the project supervisor. The development process and testing of each phase of the project will be monitored by the project supervisor. All the project funding will be managed by the University. Any additional funding for the project will require approval from the University. The project will conclude when the project report is submitted within the provided deadline along with the working executable, all the technical documentation is complete and submitted to the FYP Panel members.

C. Objectives of Project

The Tabhouse website will able address all the problems in the existing system.

The Tabhouse website will reduce the time and effort in finding the medicine manually.

The Tabhouse website will allow the user to locate the medicine which it is looking for.

II. LITERATURE REVIEW

On our research for similar and existing systems like our proposed project “Tabhouse”, we have found the number of similar websites and Android applications. The most similar ones are mentioned in this document. The services our proposed system promises are not provided by any of the existing systems we have seen so far.

A. Existing Systems

1. Find My Medicine

“Find My Medicine” is an Android application which promises similar service to our proposed project and for multiple countries as well. This Android application is currently available on the Google Play and the application is powered by Makerapp.

2. Himalaya Wellness

“Himalaya Wellness” is a web-based system that provides services that are similar to our project. This website is

powered the one of the largest Herbal Medicine brands in India “The Himalaya Drug Company”.

3. Problems in Existing System

All similar applications and websites mentioned above do provide the similar functionalities to some extent.

4. Find My Medicine

The “Find My Medicine” application promises to locate medicines in different countries but is not very user friendly and does not stick to its goals.

The application also may be providing locating service for multiple countries but it does not provides any services for the Pakistani users.

The application does not provide information about the number of medicines present in the medical store.

5. Himalaya wellness

The website does provide what it promises but, the website only provides this locator service for only its company’s products.

The website only provides the location of Indian cities.

Although there are medicine locating applications and websites in foreign countries, the existing system in Pakistan is completely manual that is, if the user needs medicine it has to look it up manual whether on foot, on the bike or on a car etc. The process of finding a medicine is completely manual and is no live service available to address this problem. Therefore, we have come up with an idea that will reduce the effort for finding a medicine.

III. METHODOLOGY

A. Development Life Cycle & Methodology

The main Development Methodology for the construction of our project is Traditional development methodology. Although the main methodology for the development of Tabhouse is Traditional development methodology, our approach toward adopting a methodology is flexible i.e. traditional methodology is not the only development methodology used. We have been using the concept from multiple development methodologies as they are suitable for the better progression of the project toward succession. Object Oriented Methodology is one of the development methodologies used in the development of the project.

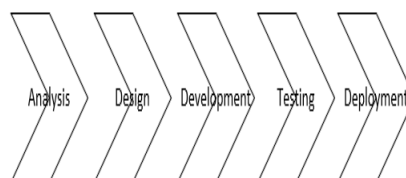


Figure 1: Traditional Linear Life Cycle

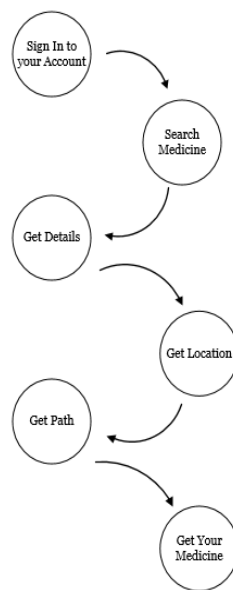


Figure 2: Work Flow of Project

B. Detailed Work Flow of Project

The user on visiting the “Tabhouse” website will first access the home page of the website. The user will then have to access the tab store webpage, where the user will be provided with the list of medical items, in order to get the location and details regarding the desired medicine. The user will then be provided with the list of medicines in tabstore. The user can decide if it wants to search the medicine by itself or it can search the medicine by entering the name of the medicine in the search bar. On selecting a particular medical item the user will have to click on find my medicine button which will allow the user to place an order for that medicine or directly jump to the location of the medicine in Google map. In the Google map, there is an option named “Get Path” provided to the user to get the path from the current location of the user to the resultant location. If the user wants to place an order for the searched item then the system will check if the user is using pro user account if the user is using the pro account, the user will be able to place an order for the selected item.

The Client (medical store owner) is provided with Inventory Management system from Team Tabhouse, the Client performs the routine operations on the IMS. The IMS on the background keep the database update and keeps updating the web server database through integrator module implemented in IMS. The IMS is sending the data updates in XML file the web server to keep the website’s database update.

The Admin has the complete access to the website as well as to the database and Admin Panel of the System. The admin can also be a user and can place orders from the Tabhouse website. The admin can add/remove items from the website, can add/remove medical stores, medicines, and user accounts.

We have selected traditional waterfall software development life cycle model for this project.

The implementation of Tabhouse project included the development of three modules the IMS (Inventory Management System), the Tabhouse website and the Admin Panel. The code of these modules is self-explanatory, each class and the variable name has been assigned according to its core functionalities.

The tools & Technologies used for the development of the project are listed below.

C. Tools & Technologies

- Microsoft Visual Studio 2013.
- SQL Server 2014.
- HTML5
- CSS
- JQuery
- Ajax
- JavaScript
- Bootstrap
- XML
- ASP.Net
- C#

D. Analysis & Design

The Analysis & Design section contains most of the system diagrams that were designed for a better understanding of the project.

1. Requirements Captured

The requirements gathering of the Tabhouse project was done by back to back interviews with the clients (medical store owners), through the expert reviews of the different expert by presenting our project and by studying every mechanism involved in our project.

The some of the requirement for the system were collected through questionnaires from 3 of our clients (medical store owner), the questionnaires were for the sharing of data and few nonfunctional requirements.

2. Overall System Architecture

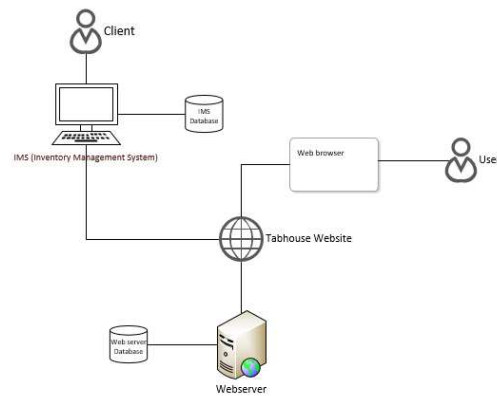


Figure 3: Overall System Architecture

3. Component Diagram

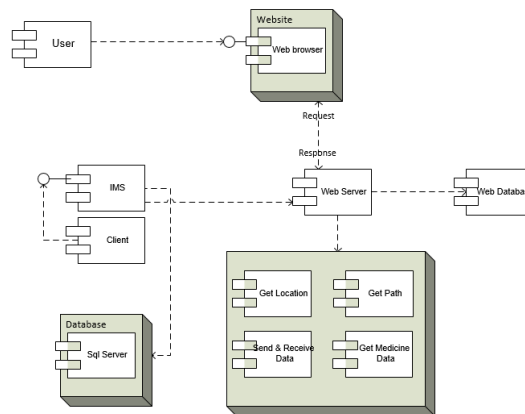


Figure 4: Component Diagram

4. Deployment Diagram

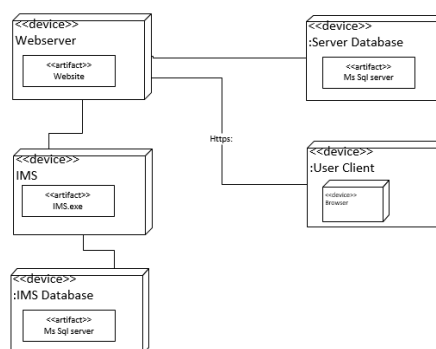


Figure 5: Deployment Diagram

5. Actor Use Case Diagram

5.1 Actor Use Case Diagram

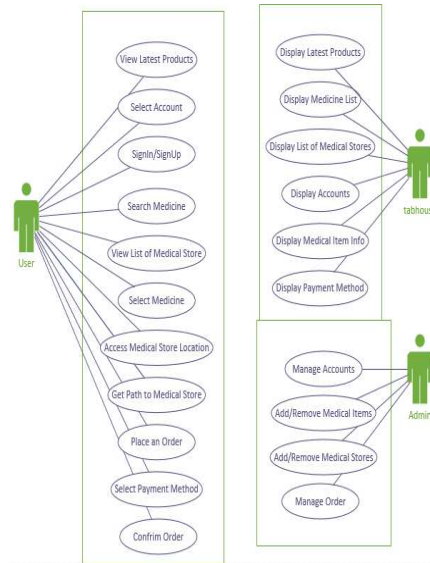


Figure 6: Actor Use Case Diagram

During the analysis & design phase of the project, we constructed the actor cases diagram system component diagram deployment diagram and the system architecture.

The Activity Diagram has been constructed for each of the use case of the project. The use case Diagram have been constructed with the help of requirement gather, Expert review, and meetings with the Clients.

Following is the Activity Diagram for locating a medicine on Google map.

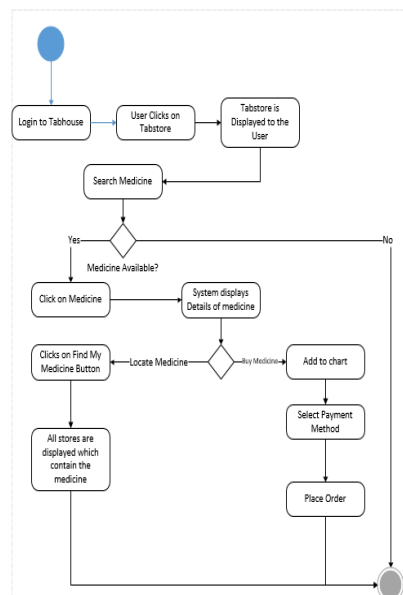


Figure 7: Activity Diagram

6. Work Breakdown Structure

1. Website Project

1.1. Analysis

1.1.1. Client Meetings

1.1.1.1. Authorization

- 1.1.1.1.1. Create Authorization Letter
- 1.1.1.1.2. Review Authorization Letter
- 1.1.1.1.3. Collect Signed Authorization Letter

1.1.2. Interviews

1.1.3. Requirement Gathering

1.1.3.1. Questionnaires

- 1.1.3.1.1. Create Questionnaire
- 1.1.3.1.2. Review Questionnaire
- 1.1.3.1.3. Conduct Questionnaire
- 1.1.3.1.4. Document Questionnaire

1.1.3.2. Functional Requirements

1.1.3.3. Non Functional Requirements

1.1.4. System Research

1.1.4.1. System Background Analysis

- 1.1.4.1.1. Research Similar Solutions
- 1.1.4.1.2. Research Problem Areas

1.1.5. Analysis Diagrams

1.1.5.1. Activity Diagram

- 1.1.5.1.1. Create Activity Diagram
- 1.1.5.1.2. Review Activity Diagram with Team
- 1.1.5.1.3. Document Activity Diagram

1.1.5.2. Data Flow Diagram

- 1.1.5.2.1. Create Data Flow Diagram
- 1.1.5.2.2. Review Data Flow Diagram with Team
- 1.1.5.2.3. Document Data Flow Diagram

1.1.5.3. Work Flow Diagram

- 1.1.5.3.1. Create Work Flow Diagram
- 1.1.5.3.2. Review Work Flow Diagram with Team
- 1.1.5.3.3. Document Work Flow Diagram

1.1.5.4. Actor Use Case Diagram

- 1.1.5.4.1. Create Actor Use Case Diagram
- 1.1.5.4.2. Review Actor Use Case Diagram with Team
- 1.1.5.4.3. Document Actor Use Case Diagram

1.2. Design

1.2.1. Database

1.2.1.1. ER Diagram

- 1.2.1.1.1. Create ER Diagram
- 1.2.1.1.2. Review ER Diagram with Team
- 1.2.1.1.3. Finalize ER Diagram

1.2.2. UI Design

1.2.2.1. Find My Medicine

- 1.2.2.1.1. Create Find My Medicine Design
- 1.2.2.1.2. Review Design with Team
- 1.2.2.1.3. Finalize Design

1.2.2.2. User Authorization

- 1.2.2.2.1. User Sign Up
 - 1.2.2.2.1.1. Create Sign Up Design
 - 1.2.2.2.1.2. Review Design with Team
 - 1.2.2.2.1.3. Finalize Design
- 1.2.2.2.2. User Sign In
 - 1.2.2.2.2.1. Create Sign In Design
 - 1.2.2.2.2.2. Review Design with Team

- 1.2.2.2.2.3. Finalize Design
- 1.2.2.3. Store**
 - 1.2.2.3.1. Create Store Design
 - 1.2.2.3.2. Review Design with Team
 - 1.2.2.3.3. Finalize Design
- 1.2.2.4. Latest Product**
 - 1.2.2.4.1. Create Latest Product Design
 - 1.2.2.4.2. Review Design with Team
 - 1.2.2.4.3. Finalize Design
- 1.2.2.5. Home Page**
 - 1.2.2.5.1. Create Home Page Design
 - 1.2.2.5.2. Review Design with Team
 - 1.2.2.5.3. Finalize Design
- 1.2.3. System Diagrams**
 - 1.2.3.1. Class Diagram**
 - 1.2.3.2. Component Diagram**
 - 1.2.3.3. System Deployment Diagram**
- 1.3. Implementation**
 - 1.3.1. Home Page**
 - 1.3.1.1. Code Home Page
 - 1.3.1.2. Review Home Page Functionality with Team
 - 1.3.2. User Authorization**
 - 1.3.2.1. Code User Authorization Module
 - 1.3.2.2. Review User Authorization Functionality with Team
 - 1.3.3. Store**
 - 1.3.3.1. Code Store web page
 - 1.3.3.2. Review Store web page Functionality with Team
 - 1.3.4. Find My Medicine Page**
 - 1.3.4.1. Code Home Page
 - 1.3.4.2. Review Home Page Functionality with Team
 - 1.3.5. Latest Products**
 - 1.3.5.1. Code Latest Products Web Page
 - 1.3.5.2. Review Latest Products Web Page Functionality with Team
- 1.4. Testing**
 - 1.4.1. Usability Testing**
- 1.5. User Support**
 - 1.5.1. User Manual**
 - 1.5.1.1. Create User Manual
 - 1.5.1.2. Review User Manual with Team
 - 1.5.1.3. Document User Manual
 - 1.5.2. Other Project Documentation**
- 1.6. Maintenance**
 - 1.6.1. Feedback**
 - 1.6.2. Bug Fixes**
 - 1.6.3. Project Status**

IV. RESULTS AND EVALUATION

The Results of the proposed solution are as follows:

Home Page

The provide screenshot below is the home page of Tabhouse website which provide pathway to each page and section of the website.

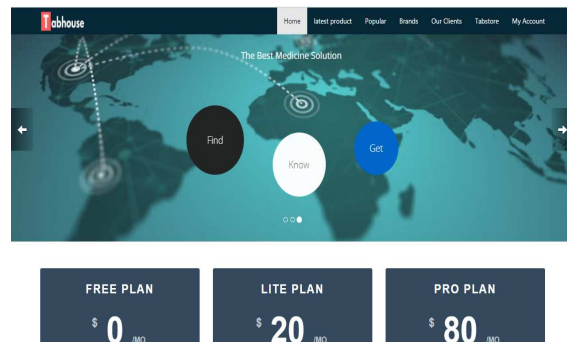


Figure 8: Home Page

Login

The login webpage allows the user to access its user account in providing the required information to the website.

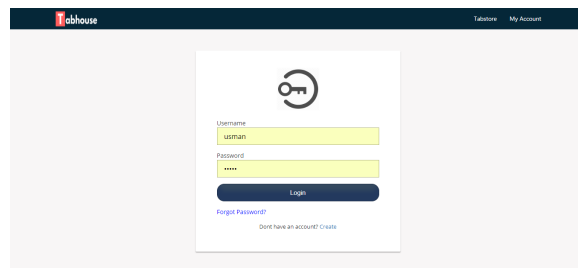


Figure 9: Login

User Plan

The list of User Accounts is a section of the Home page of the website that allows the user to select the plan which is most suitable for the user.

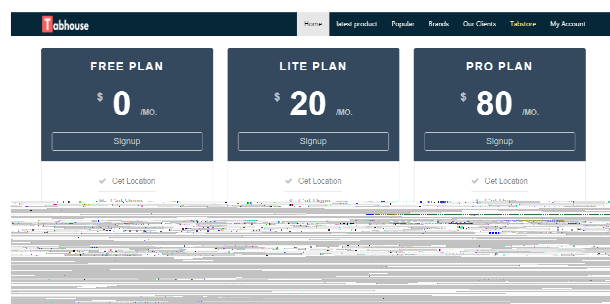


Figure 10: User Plan

Get Path

Get path is a feature of the Tabhouse website that allows the user to get a route to the selected medical store from the current location of the user.

View Location

This feature allows the user to view the location of the medical stores that contains the medicine the user has selected.

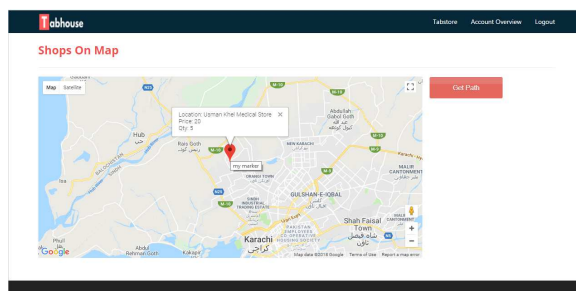


Figure 11: View Location

Dashboard

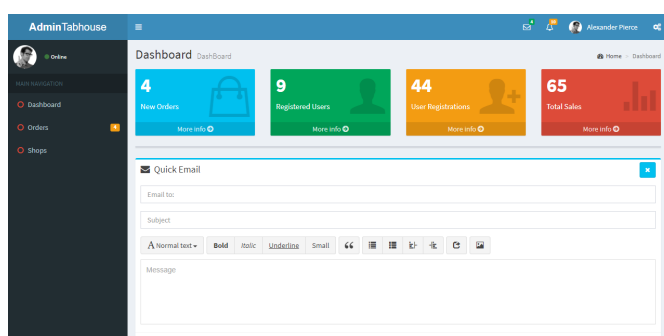


Figure 12: Dashboard

V. FUTURE WORK

The Tabhouse project has almost completely automated the current unreliable and inconvenient exist system for finding a medicine. The Tabhouse project has been constrained due to a number of factors, as the current medical industry and medicine market is not very friendly to the automated systems such as Tabhouse which has extremely limited the scope and market value of the Tabhouse project. The project such as Tabhouse requires complete data sharing from the Clients (medical store owners) side which is not very easy at the present time which limits the project to fulfill its goals and objectives, but as the time passes and the medicine market becomes friendlier to data share, the Tabhouse will be able to complete its main goals and objective. At end of the project, we have been able to locate medicines form 3 Medical stores in Karachi. The project can be extended to a wider range and can provide the service for the whole City of Karachi in the future. The Project does not include fully functional medicine ordering system which in future, if addressed can widen the scope of the project and more market value of the project can be expected. The Tabhouse currently is showing a result for medicines which can be also be extended to by providing same services along with another medical item including surgical items etc.

VI. CONCLUSIONS

The 'Tabhouse' website will offer all conveniences regarding finding a medicine in possibly the nearest medical store. This service by 'Tabhouse' website is currently supported only in Karachi and on successful execution/launch of our website, we are aiming to expand this service to other big cities of Pakistan.

We have concluded that:

The Tabhouse website will provide reduce the effort and time for finding a medicine.

The Tabhouse will provide the accurate location of the searched medicine.

The Tabhouse website will provide the path from the current location of the current to the medicine that contains the selected medicine.

The Tabhouse will provide the quantity of the medicine in each of the medical stores.

The Tabhouse website will provide the medicine's chemical formula along with the description of the medicine.

The Tabhouse will provide details of the clients (medical store owner)

The Tabhouse will provide the wholesale price of the medicine.

The Tabhouse will provide a record of upto 500 medicines.

VII. ACKNOWLEDGEMENTS

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